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Willingness to Pay Today for a Cleaner Tomorrow

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Willingness to Pay Today for a Cleaner Tomorrow

To a ten year old boy on a tedious trip across the country side, few views are more fascinating than a wind farm. Massive turbines spin slowly as if to emphasize their preposterous size and magnificence. In an era where increasing global attention is brought to climate change, renewable energy is carving its way into the minds of billions. This once free roadside attraction is now something that in the near future, we must pay and patronize, and this is where my literature begins, how willing are we to pay for renewable energy? Are you willing to pay to give up what is essentially two and half centuries of fossil fuel tradition for some wind and sun? I would argue yes and to support my claim I'll outline two main points that will help emphasize the importance of renewable energy: the external costs of the current system, and the cost to the consumer.

First a look at the externalities caused by current fossil fuel technologies. To any argument there are always moral implications, and the external costs of fossil fuel consumption is a big one. Why should we care that greenhouse gas emissions are at an all-time high? Why should I pay money to replace a system that is working for us now? Fair points, and with the election fast approaching, climate change has been a hot topic in the media as of late. Now, more than ever, in this increasingly conservative time global climate change is an issue that warrants attention. In the last fifteen years significant research has been done to determine the external costs of fossil fuels^{[1][2]}. Data shows externalities in the range of 2 to 5 cents per kWh of fossil fuel and even more startling is that 90% of this is determined to be health risks^[3]. Again, "why should I care" one may ask. Well to put it into perspective, it costs roughly 3.23 cents per kWh to

produce electricity using coal (i.e. fossil fuel) ^[4]. This means nearly all of the production cost again is the damage done to society. Put a different way, the national cost average per kWh of electricity is 12 cents ^[5]. This means that if external costs were included in the price, we would be paying an additional 25% of our average rate. Now with all that said, the simple truth of the matter is that greenhouse emissions are becoming a serious health and environmental issue. From a moral standpoint, renewable energy is a step in the correct direction and fortunately the monetary data backs that claim.

So now that we've looked at the external costs (i.e. damage to society) of fossil fuels, the question still remains as to why we should support and more importantly pay for renewable energy? Now that we've seen the monetary impact fossil fuels have on our society let's look into how we can combat this with renewable energy and its impact on the consumers' price. Currently, wind power costs about 5 cents per kWh, and solar power will cost about 12.5 cents per kWh ^{[7] [8]}. Neither renewable energy type is ludicrously expensive, in fact wind power thanks to recent innovations has reached an all-time low of 2.5 cents per kWh in some locations which is actually lower than the cost of coal energy production. Now all of this is irrelevant if people are not willing to pay for the increase in price from fossil fuels, but recent surveys have found that people are willing to pay an increased \$16 to \$98 per month for renewable energy. Mathematical analysis shows the average consumer will see an increase in their bill (for the same amount of electricity consumption) of \$15.95 per month, or well within the limits of what people say they are willing to pay ^[6]. Now this is a wide range from just one study, but put simply, the cost of renewable energy (wind in particular) are becoming lower and lower. In fact, the cost of wind energy today is nearly identical to that of coal.

So to wrap up, data shows that from a monetary and moral standpoint, people are willing to pay for renewable energy. That said however, whether we like to admit it or not, we all live in an incredibly reactionary society. One that needs fear to spark action, death to start a revolution, and unfortunately, drastic climate change to prompt change. It's in our human nature, but I believe (and so does the data), that people are willing to move forward and take a proactive step towards a green revolution. This is important, because frankly the days of saying "tomorrow" are over, and regardless of the financial viability or political agenda, renewable energy needs to happen. Hopefully, a century from now, a ten year old boy can look out his window and see the wind farms and marvel at their technical innovation, and not a desolate earth that was "too late".

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